III. HESSLER INDUSTRIAL PARK

A. INTRODUCTION

The proposed site for the IM-240 emissions testing facility was on the northwestern section of the Hessler Industrial Park property, along U.S. 13 just south of Wilmington in New Castle County, Delaware (Figure 7). The project area measured 16.9 acres. In January 1995, when we first visited it, the site was a rather desolate piece of wasteland surrounded by highways and dotted with litter. However, this spot, too, had its history, as the archaeological survey showed.

B. PROJECT SETTING AND ENVIRONMENT

The IM-240 project area is about 300 feet (90 meters) from the current channel of the Christina River, separated from the river by Interstate 495. Inspection of older maps showed that, before I-495 was built, the project area bordered wetlands on the west, associated with the river itself, and on the northeast, along a small tributary known as Boseman's Creek (Figure 8). Before filling, the eastern portion of the project area was a low-lying ravine that drained eastward into Boseman's Creek. Surface elevations within the project area varied from 5 to 35 feet above sea level. The natural soil on the higher parts of the site was a sandy, well-drained type known as Sassafras sandy loam (Mathews and Lavoie 1970).

Although the project area was located within greater Wilmington, surrounded by highways and built-up areas, at the time of the survey it was unused and covered by grass and scrub woodland. A paved road, supported on a mound of fill, ran along the eastern edge, terminating in a paved turnaround about 50 feet in diameter near the northeastern corner of the project area. No structures were standing in the project area; however, a recent cinder block ruin measuring 12 by 25 feet was present within a grove of trees near the southwestern corner of the project area. Within the wooded portion of the site, some areas were relatively open, but some contained extremely dense tangles of young trees, brambles, and vines through which paths had to be cut with machetes and axes (Plate 1). The wetlands on the Hessler property were degraded, with no visible plant life except the imported weed *Phragmites* and quite a few tires and other pieces of debris. However, the wetlands must once have been rich environments. In their wild state, such marshes contained many food resources that were exploited by both prehistoric Native Americans and early settlers. These natural resources included fish, shellfish, ducks and other water fowl, turtles, mammals, such as muskrats, raccoons, and deer, and a wide variety of edible plants, such as wild rice, pickerel weed, cattails, and arrow arum. Any level high ground close to such wetlands was an attractive spot for prehistoric peoples to use as a camp site, and therefore such camp sites could be expected on the Hessler property.

C. HISTORY OF THE HESSLER TRACT

Although the project area was known as the Hessler Industrial Park property, this industrial park seems to have existed only in the imagination of the owners. It was one of thousands of development schemes gone awry that dot the American landscape. The paved road leading to the northern or rear section of the property was the only tangible outcome of the industrial park plan: a driveway to nowhere. A drive-in theater had once been located on the front section of the property along U.S. 13, and evidence of the radial parking scheme for moviegoers' cars was still visible through the grass. The rear section of the property, where the project area was located, showed almost no evidence of recent activity.

Nineteenth-century maps show houses in the general vicinity of the project area, the closest one apparently just to the south. This house is shown on maps from 1849, 1868, and 1881; on the 1849 Rea and Price map (see Figure 8), it is marked "Newman." These maps are not precise, but

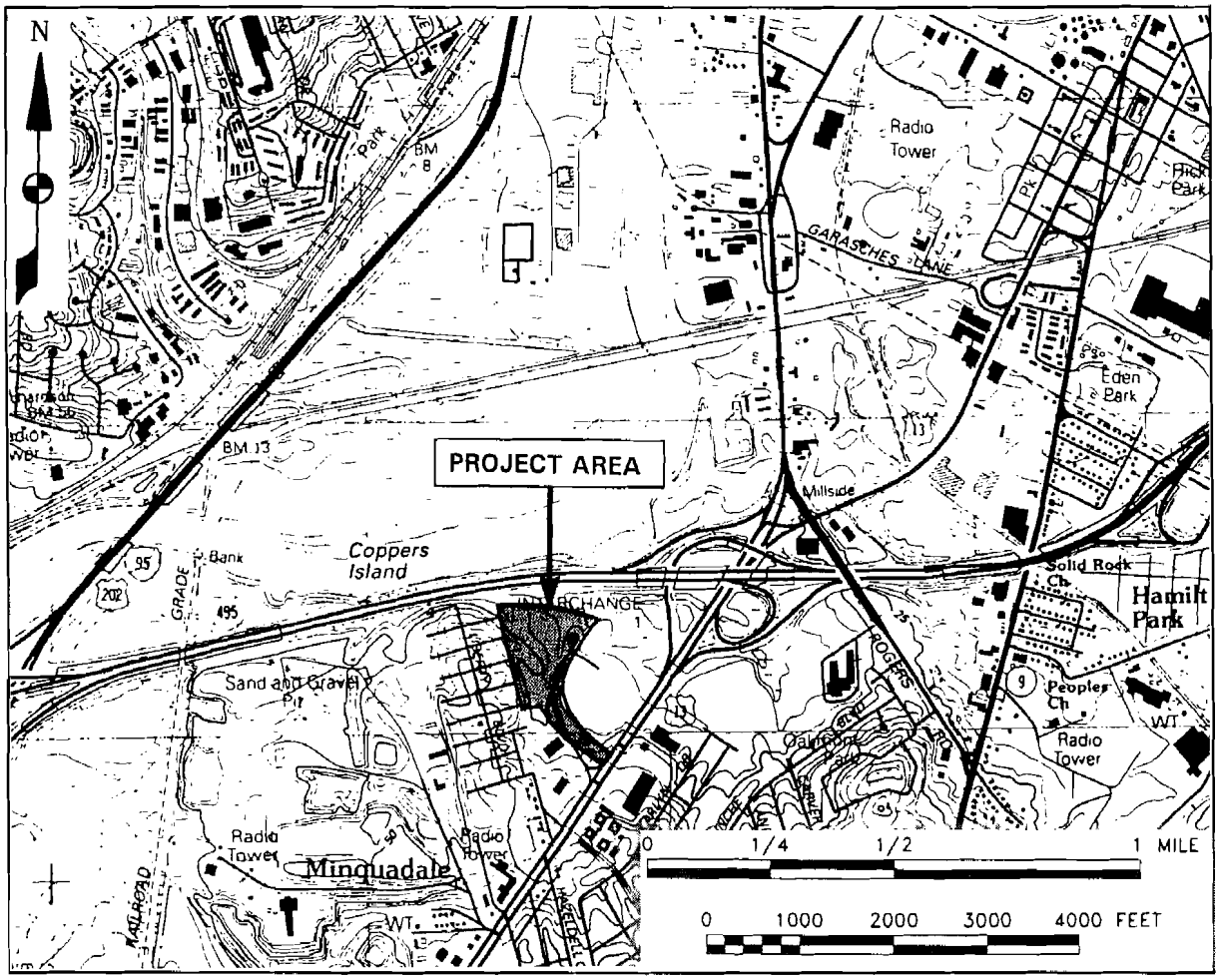

FIGURE 7: The Hessler Industrial Park/IM-240 Site

SOURCE: USGS Wilmington South, DE, Quadrangle 1953

scaling all three of them places the house outside the project area where the Minquadale housing development now stands. No structure is shown clearly within the project area on any of these maps.

> The Whigs are perhaps most remarkable for having stood for so little.

The ownership history of the property was traced back to the late 1700s, when it was part of a large farm belonging to John Stockton (see Appendix A for the full chain of title). In 1808 John Stockton deeded the property to his son, Thomas Stockton; at that time it was said to comprise 300 acres. The Stocktons also owned a 400-acre farm in St. Georges Hundred which seems to have been their main residence, so the 300-acre farm may have been leased to tenants.

The Stocktons were an important family. John Stockton served as a general in the War of 1812 and also held various government posts. His son, Thomas, also a veteran of the 1812 war, ran for governor of Delaware in 1845 on the Whig ticket. The Whigs were a new and short-lived party who represented eastern financial and Protestant moral interests after the defeat of the Federalists at the hands of Andrew Jackson. The Whigs are perhaps most remarkable for having stood for so little. The famous "Tippecanoe and Tyler Too" campaign of 1840 was almost completely devoid of substance; it featured mass rallies, an enormous media blitz, and a fake log cabin where

Presidential candidate William Henry Harrison was said to have grown up. (He was actually born on a plantation into a very wealthy family.) The Whigs disappeared quickly when the Republican Party began to develop in the 1850s (Schlesinger 1945).

The Whigs were strong in Delaware, and Stockton was elected easily; however, he died suddenly of a heart attack shortly after taking office. His estate was then broken up and sold to satisfy his debts and endow his children, and the Hessler property became part of a 75-acre tract that was sold to John Beauclerc Newman in 1847.

Newman was another very wealthy man who owned several farms, and his main residence seems to have been on a 345-acre farm near New Castle. According to the property deeds, Newman held on to the Hessler tract throughout his life, and his heirs did not sell it until 1915. However, the historical maps show a series of other owners for the tract, including Colonel J. Willy (1868) and George Lobdell (1893). It seems unlikely that John Newman lived long enough for his heirs to have been carrying out his will in 1915, so there is probably some sort of problem with the property deeds. Most likely, the Hessler tract did have several owners during the period between 1845 and 1915.

The ownership history of the tract becomes clear again after 1916, when the property was sold to the Wilmington Trust Company. Paul Hessler, the man who developed the industrial park plan, purchased the tract in 1927, and either he or his real estate company owned the property until the 1990s.

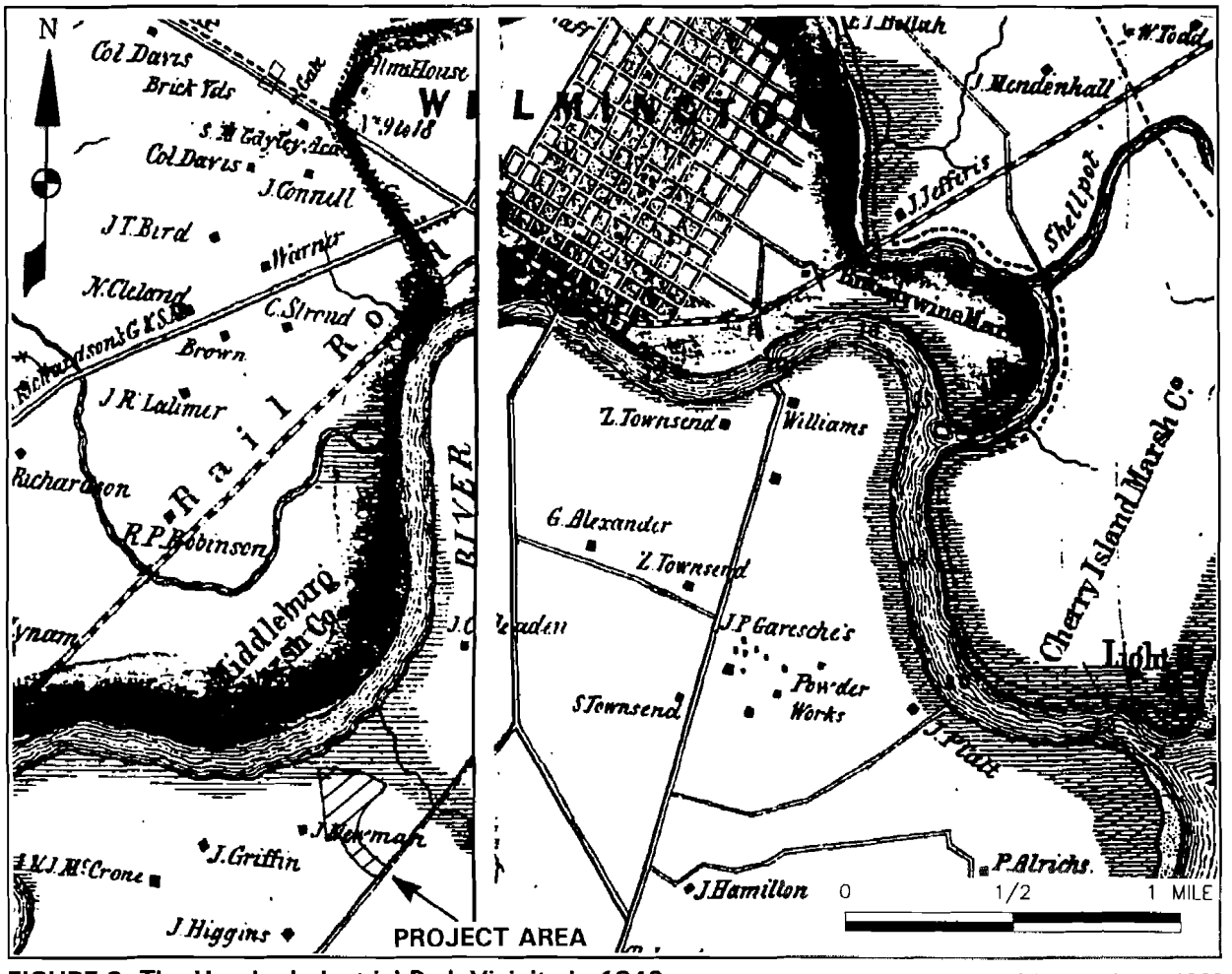

FIGURE 8: The Hessler Industrial Park Vicinity in 1849 *SOURCE: Beers 1868*

D. THE ARCHAEOLOGICAL SURVEY

1. Methods

The project area, which was roughly triangular, measured approximately 16.9 acres. Of this, 2.4 acres were wetlands. The wetland area was not threatened by the proposed construction and therefore was not subjected to archaeological survey. Because of its proximity to wetlands and the Christina River, all of the remaining 14.5 acres was initially considered to have high potential for prehistoric archaeological sites. It was also thought that remnants of colonial farms and outbuildings or tenant dwellings associated with the nearby nineteenth-century dwellings might be present. It was therefore proposed to shovel test the entire project area at 50-foot (15-meter) intervals. Initial testing showed, however, that approximately 3.2 acres located in the southeastern part of the project area were covered with fill more than 3 feet (1 meter) in depth (Figure 9). An attempt was made to penetrate the fill with a bucket auger, but in most places the fill contained quantities of concrete rubble, and a complete soil core was not possible.

PLATE 1: Shovel Testing at the Hessler Industrial Park

In addition, portions of the project area had been obviously disturbed by recent grading. In places, cutbanks up to three feet high divided the areas of intact soil from the graded areas, showing that the disturbance was severe. The boundaries of the disturbed area were defined by a combination of surface inspection and shovel testing; overall, about 3.6 acres had been disturbed in this way.

The undisturbed, unfilled portion of the project area, measuring 7.3 acres, was shovel tested at about 50-foot (15-meter) intervals. The shovel tests were numbered in transects, with the first shovel test in Transect A labeled Shovel Test A-1 and the fifth test in Transect H labeled H-5. Most of the transects ran from north to south, beginning adjacent to the fence along I-495 and extending through the woods and out into the field. However, the limited testing carried out in the filled and disturbed areas did not always correspond to this grid. Transect Z ran from northwest to southeast in a low area adjacent to the road; this low area was not a historic drainage but an artifact of filling, and it was hoped that excavations in this

area of thinner fill could reach the original ground surface beneath it. Nine shovel tests, which are labeled on Figure 10 with asterisks (*), were excavated on a different grid in the filled area before it became apparent that the fill was too deep to penetrate by hand. In addition, several shovel tests labeled with double letters (AA-1, BB-1, BB-2, CC-1, CC-2) were excavated in the wooded area before the grid was established in order to verify that testable soils were in fact present. Close-interval shovel test pits were labeled with the number of an adjacent grid shovel test and a letter indicating direction: *a* for north, *b* for east, *c* for south, and *d* for west (see Figure 10).

Portions of the project area had been obviously disturbed by recent grading.

The initial survey grid on the Hessler property consisted of 172 shovel tests. An additional 69 close-interval shovel tests were excavated around shovel tests that yielded artifacts. Two 3.3x3.3-foot (1x1-meter) test units were also excavated at the archaeological site. Testing was also carried out along the proposed access road, but all the soil in this area was disturbed.

2. Findings

The shovel testing showed that 25 percent of the IM-240 project area had been disturbed by grading and 22 percent was buried under deep fill, leaving 53 percent for the archaeologists to test. In the disturbed portion of the project area (see

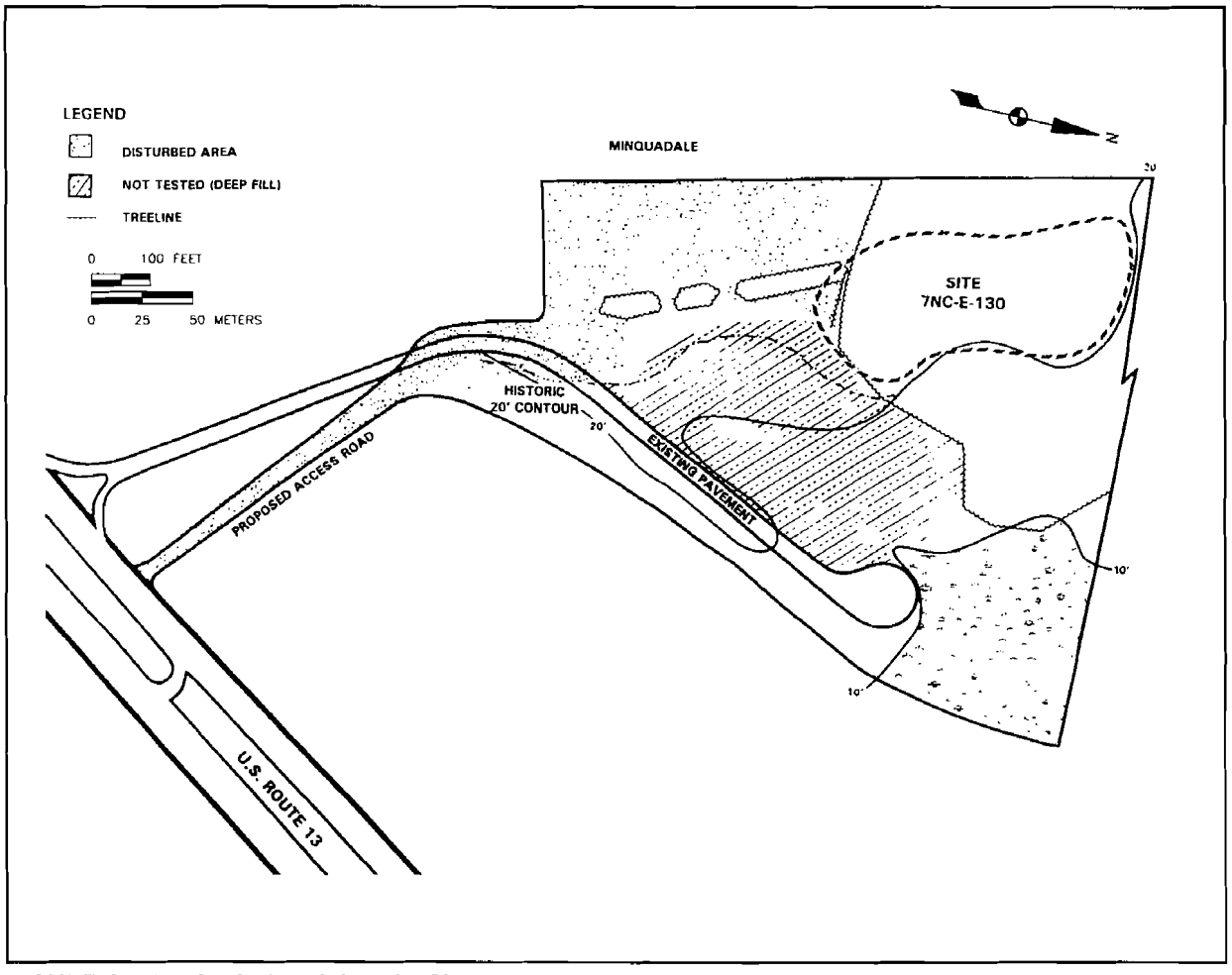

FIGURE 9: Hessler Industrial Park, Showing Areas of Filling and Disturbance

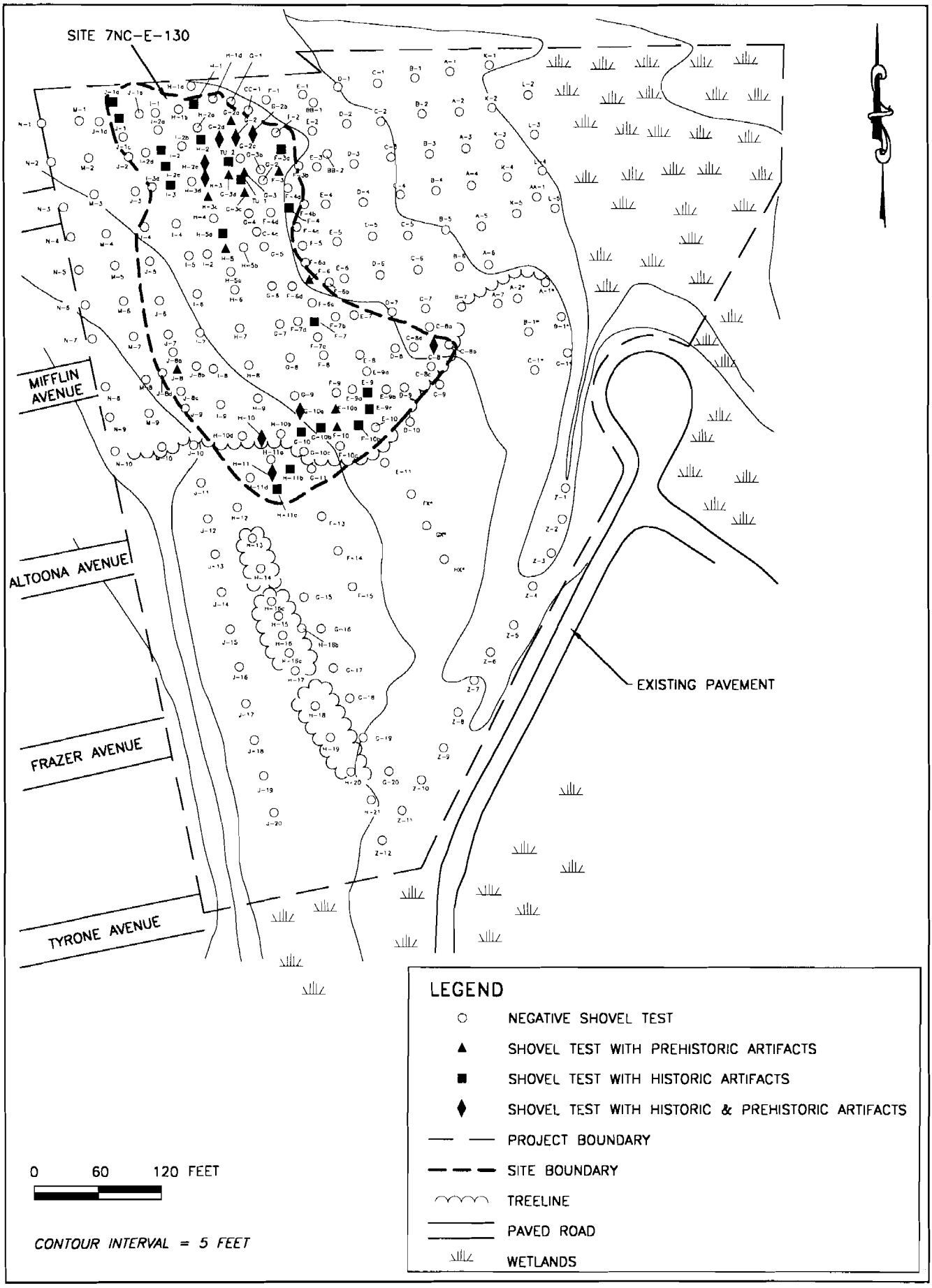

FIGURE 10: Plan of Archaeological Testing at the Hessler Industrial Park

PLATE 2: Excavating Test Unit 1 at the Hessler Industrial Park

Figure 9), the original topsoil had been completely graded away, leaving old subsoil exposed on the surface. A line of trees running across this portion of the project area, from the wooded area toward the entrance road, actually represented a remnant of original ground surface (see Figure 10). West of the trees the ground had been graded away, leaving the trees standing on islands raised up to 3 feet (1 meter) above the new ground surface. The gaps between the trees had also been graded. The grading extended around the trees on the southern side, where Shovel Tests Z-10, Z-11, and Z-12 located original subsoil under shallow fill.

Inspection of older USGS maps indicates that the filling of the site took place after 1946, a conclusion supported by the presence of recent construction debris in the fill. Comparison of current topographic maps with the 1946 USGS map provides some indication of the scope of the filling. Before filling, the southeastern quadrant of the site consisted of a low-lying, gently sloping ravine that drained east toward Boseman's Creek. Parts of the ravine were probably marsh; areas immediately adjacent to the fill are marsh today, and there is no reason to think that the filling was halted exactly at the marsh edge. The filling was quite substantial; the parking pad southeast of the site is raised more than 10 feet above the old ground surface. Along the northern edge of the field, at the edge of the filled area, shovel tests were able to locate the original ground surface underneath the fill, sloping downward into the old ravine. Along the western edge of the filling, the situation was more confused. In two shovel tests just east of the treeline, Shovel Tests H-16b and G-15, undisturbed original ground surface was located under shallow fill. However, nearby shovel tests were excavated to a depth of 3.3 feet (1 meter) without locating any original ground, and inspections of the surface seemed to indicate that some grading had also been carried out in this area. Although the area is now covered with grass, a 1972 (scale 1"=50') map supplied by DelDOT shows extensive tree cover. Small but significant differences between the contours on the 1972 map and DelDOT's 1994 map also

appear to indicate grading in the area. The evidence suggests that the area's old ground surface — which would have been the most interesting part of the buried soil, since it had an elevation of around 20 feet — has been seriously disturbed. Either during the original filling process or when the trees were removed, grading destroyed much of the original soil in this area.

3. The Hessler Site

One archaeological site, containing a prehistoric component and a nineteenth-century component, was found in the project area and was designated the Hessler Site, 7NC-E-130. This site was located in the northern, undisturbed portion of the project area, and measured approximately 550 feet (170 meters) northwest to southeast and 200 feet (60 meters) northeast to southeast. Both the historic and prehistoric components were in approximately the same place. The site was bounded on the north and northeast by the 20-foot contour, suggesting that lower elevations were historically too wet for occupation. The western boundary was the edge of the project area, with I-495 just beyond. The eastern boundary was the disturbed area, but since two whiteware sherds were found in Shovel Tests H-17 and H-17c on an island of surviving intact ground further south, it was evident that at least part of the historic component had been recently destroyed. The southern boundary was determined archaeologically, since several shovel tests in this area contained no artifacts.

The stratigraphy at the Hessler Site was somewhat confusing, and the archaeologists were not confident that they understood it from the shovel

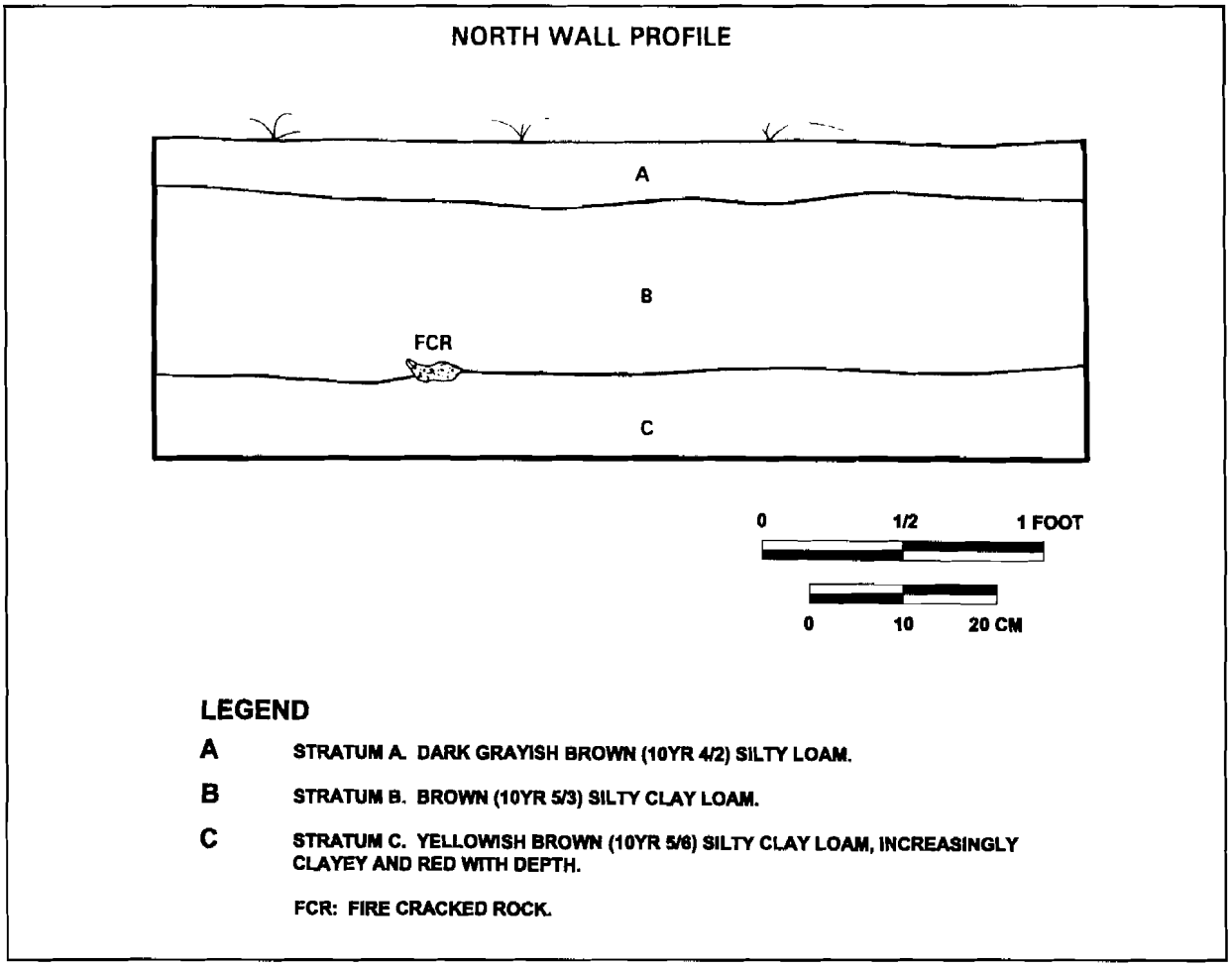

FIGURE 11: Profile of Test Unit 1, Hessler Industrial Park Site

test excavations. They therefore excavated two larger test units in the area that had the highest density of prehistoric artifacts (Plate 2). The test units measured 3.3x3.3 feet (1 square meter). Three soil layers were recorded in both test units (Figure 11). The top layer, Stratum A, was a highly organic topsoil or humus, dark grayish brown in color, approximately 2 inches (5 centimeters) thick. The next layer, Stratum B, consisted of brown to grayish brown silt loam, approximately 8 inches (20 centimeters) thick. Most of the artifacts from the site, both historic and prehistoric, were recovered from Stratum B. The third layer, or Stratum C, consisted of yellowish brown clay loam, increasingly claylike with depth; no artifacts were recovered from Stratum C. Because the boundary between the B and C strata was very distinct, the site appears to have been plowed, with the A and B strata forming the plowzone. This is not certain, however, as no plowscars were observed. In one corner of Test Unit 2, the combined A and B strata were 16 inches (41 centimeters) thick, a very deep plowzone for such a level site. The trees on the site were quite small, indicating that the site had been cleared in recent times, probably with the use of heavy machinery. In any case, the presence of historic artifacts at the bottom of Stratum B indicates that the site has been disturbed in some way, so the prehistoric deposits cannot be considered intact.

a. Prehistoric Component

The prehistoric component of the Hessler Site consisted of a thin scatter of stone flakes, which occupied approximately the same area as the historic site; however, the heart of the prehistoric site was on a low ridge in the project area's northwestern corner. Most of the prehistoric artifacts came from an area measuring about 150x175 feet (45x50 meters). This artifact concentration occupied a well-defined elevation, effectively bounded by the 20- and 25-foot contours. Before the site was filled and I-495 was built, this small, fairly level area was surrounded on three sides by wetlands and presumably represented a camping site well-situated to exploit the plant and animal resources of the marshes.

Most of the 80 prehistoric artifacts from the site were flakes left from making stone tools, or cracked rocks that may have come from fire hearths (Table 1). The only tool found was a

Table 1. Prehistoric Stone Artifacts from the Hessler Site

	RAW MATERIAL					
ARTIFACT TYPE	Jasper	Quartz	Chert	Quartzite	Sandstone	TOTAL
Cores						
Freehand Cores	1	.	1	.	.	1
Tested Cobbles	.	.	1	.	.	1
Debitage						
Flake Fragments	8	5	2	.	.	15
Block Shatter	1	5	1	.	.	7
Decortication Flakes	5	2	.	.	.	7
Early Reduction Flakes	6	3	3	1	.	13
Biface Reduction Flakes	3	3	1	.	.	7
Hammerstones	.	.	.	1	.	1
Fire-Cracked Rock	4	.	3	19	1	27
TOTAL	28	18	12	21	1	80

battered cobble that seemed to have been used as a hammerstone. The stone material could all have come from cobbles found in the site vicinity.

The rather thin artifact scatter (0.3 artifacts per shovel test in the site as a whole, 1.0 in the center of the site) suggests occasional use of the site by small groups of hunters or foragers. Custer (1994:83-94) calls this type of site a "procurement site," a place where people camped for a short time while procuring food or other resources. Only one of the prehistoric artifacts recovered from the Hessler Site was datable, a sherd of pottery tempered with steatite, or soapstone. It could have been one of two varieties, either Marcey Creek or Selden Island, dating from 1200 to 600 BC. A single sherd is a thin basis from which to date a whole collection, and the artifacts may come from different episodes of use separated by centuries or even millennia. Still, at least one episode of use probably occurred in the period represented by the sherd. Since the site is apparently associated with fairly recently formed wetlands, it seems unlikely that the site was used before about 3000 BC (Kraft and John 1978).

b. Historic Component

The historic component of the Hessler Site was a scatter of artifacts dating to the 1820-1860 period. A total of 96 historic artifacts were found, consisting primarily of ceramics (68 sherds), along with nine nails, eight pieces of bottle glass, four pieces of window glass, four small pieces of badly rusted iron, and three brick fragments. No foundations or other features were found, and there were no surface indications of a farmstead.

The Hessler Site was almost certainly not the remains of the house shown on the 1849 to 1893 maps. The quantity of artifacts found was far too low, and the date range does not match. The overall average was less than one artifact per shovel test and 18 artifacts per test unit, not nearly enough to have been the remains of a substantial farm. On a farm occupied throughout the 1840-1900 period, 50 shovel tests and two test units ought to have produced hundreds of objects. The Hessler Site also produced none of the distinctive artifacts common at sites dating to after 1880. Bottle glass in particular becomes very common in that period, and the Hessler Site produced only eight pieces of glass. The Hessler Site must be the remains of something much less substantial.

The archaeologists considered the possibility that the site was the remains of a small tenant dwelling that was occupied for only a few years. However, the ceramics (Table 2) seem to represent a longer time period. They include many different styles and vessel types, some of them not made until after 1835 and others most common 30 years before. Although it is possible that we simply found a rather eccentric collection dating to the 1840s, it seems more likely that the artifacts were discarded over at least a couple of decades. Overall, the Hessler Site looks like a work area or other outlying part of a farm, where some household trash was occasionally thrown away.

E. CONCLUSIONS AND RECOMMENDATIONS

During the survey of the Hessler Industrial Park property, 241 shovel tests were excavated and a single archaeological site was found. A substantial portion of the project area had been disturbed by recent grading, and another part was buried under deep fill. The buried portion was low and wet, however, and it had little potential for archaeological remains.

The Hessler Site, 7NC-E-130, does not appear to meet eligibility criteria for listing in the National Register of Historic Places. The prehistoric component was a thin scatter of stone flakes and fire-cracked rock, probably representing a procurement site used occasionally during the 3000 BC-AD 1000 period. The single diagnostic artifact was a potsherd dating from 1200 to 600 BC. No significant spatial patterning was discernible in the artifact distribution, and test unit excavation confirmed that the soils on the site had all been disturbed. No features other than shallow hearths would be expected on this type of site, and in this location such features would

Table 2. Historic Ceramics from the Hessler Site

CERAMIC TYPE/VARIETY (DATE RANGE)	COUNT	PERCENTAGE
Coarse Earthenware		
Redware (not dated)	23	33.8
Buff-bodied Earthenware (not dated)	1	1.5
Red-bodied Slipware (1670-1850)	1	1.5
COARSE EARTHENWARE SUBTOTAL	25	36.8
Pearlware		
Plain (1775-1840)	3	4.4
Underglaze Blue Handpainted (1775-1820)	1	1.5
Underglaze Polychrome Handpainted (1795-1825)	1	1.5
Transfer-printed, Blue, with Stipple	1	1.5
Dipped (1790-1890)	2	2.9
PEARLWARE SUBTOTAL	8	11.8
Whiteware		
Plain (1815-1990)	25	36.8
Transfer-printed, Blue (1815-1915)	3	4.4
Transfer-printed, Flowing Colors (1835-1910)	2	2.9
Dipped, Mocha (1815-1890)	1	1.5
Sponged (1815-1940)	1	1.5
Colored Glaze (1815-1990)	1	1.5
Simple Bands (1815-1990)	1	1.5
WHITEWARE SUBTOTAL	34	50.0
Yellowware (1827-1940)	1	1.5
SITE TOTAL	68	100

certainly have been disturbed. Custer (1994) suggests that appropriate research topics for disturbed procurement sites are chronology and lithic technology, but since the Hessler Site has few artifacts and cannot be precisely dated, it has little to contribute to either of these topics. The site has little potential to contribute to our knowledge of the region's prehistoric inhabitants.

The historic component is most likely a scatter of trash associated with a residence located outside the project area to the west. Little historic material was recovered, all from mixed contexts. The historic context developed by the Delaware State Historic Preservation Office for sites of this type and period (De Cunzo and Garcia 1992) emphasizes the evaluation and excavation of complete farmsteads and assigns little value to disconnected deposits like those at the Hessler Site. It is impossible to associate the artifacts from the Hessler Site with any particular household, further reducing its interpretive value (LeeDecker and Friedlander 1985; LeeDecker et al. 1987). It is unlikely that any intact features would be found, since the center of the household was probably outside the project area. The site has little potential to supply important information about local or regional history. Although the property had important owners, including Thomas Stockton, its associations with these figures are weak. In any case, at the time of the survey the property had become an abandoned industrial park and retained little association with its nineteenth-century agricultural past.

Neither the historic nor the prehistoric component of the Hessler Site is potentially eligible for listing in the National Register of Historic Places under Criterion D or any other criterion, and no further work is recommended on the site.